

THE CLAIMS

What is claimed is:

1. A food composition comprising a food and a flavoring agent comprising a precursor mixture of flavorings wherein the precursor mixture of flavorings is present in an amount sufficient to generate a roasted or grilled aromatic note when the food composition is heated above 50°C, and the precursor mixture of flavorings comprises:

at least one polysulfide in an amount sufficient to generate a thiol when the food composition is heated above 50°C to provide a roasted or grilled aromatic note; and

at least one non-volatile source of sulfur comprising at least one sulphydryl group, wherein the non-volatile source of sulfur is present in an amount sufficient to react with the polysulfide to form the thiol and release the aromatic note when the food composition is heated above 50°C.

2. A food composition according to claim 1 wherein the precursor mixture is in the form of a complex of the non-volatile source and the polysulfide.

3. A food composition according to claim 1, wherein the polysulfide has the general formula $R-(S)_n-R'$, wherein n is greater than or equal to 2, and R and R' are identical or different and represent hydrogen; straight chain, branched chain or cyclic hydrocarbon groups, which optionally includes unsaturation, heteroatoms and/or other functional groups or an aromatic ring which optionally includes one or more heteroatoms which optionally are substituted on or incorporated in groups pendant to the aromatic ring.

4. A food composition according to claim 1, wherein the polysulfide is obtained by bioconversion of a cysteine-aldehyde conjugate using baker's yeast.

5. A food composition according to claim 1, wherein the non-volatile source of sulfur is selected from the group consisting of sulfur-containing amino acids, peptides containing at least one sulfur-containing amino acid, proteins containing at least one sulfur-containing amino acid, and protein hydrolysates containing at least one sulfur-containing amino acid.

6. A food composition according to claim 1, wherein the thiol is formed in a yield of 48-90%, when heated at a neutral pH.

7. A food composition according to claim 1, wherein the non-volatile source of sulfur is selected to be one or more proteins comprising at least one sulfur-containing amino acid and a hydrophobic pocket which forms a complex with the one or more polysulfides.

8. A food composition according to claim 7, wherein the precursor mixture is dried so as to obtain a stable powder before being added to or incorporated into the food composition.

9. A food composition according to claim 1, wherein the precursor mixture of flavorings is added in a proportion of about 0.07-0.50% by weight relative to the dry weight of the food composition.

10. A food composition according to claim 9 wherein the precursor mixture is in the form of a complex of the non-volatile source and the polysulfide.

11. A food composition according to claim 1 wherein the polysulfide comprises at least one of dimethyl disulfide, bis (2-furfuryl) disulfide, bis(3-methyl-2-furyl) disulfide, bis (3-methyl-2-buten-1-yl) disulfide or thioketone disulfide.